INGALS (E.F.)

CAUTERIZATION OF THE NARES, AND ACCIDENTS THAT MAY FOLLOW.

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CAUTERIZATION OF THE NARES, AND ACCIDENTS THAT MAY FOLLOW.

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Although from time to time articles have been written to show that serious accidents often follow cauterization of the nares, I think that, when properly done, this operation is quite as free from discomfort or danger as any other minor surgical procedure.

I have occasionally heard of serious results following these operations, but have never had one in my own practice, and I believe that as a rule they are due to carelessness or inexperience upon the operator's part which induce him to make extensive wounds or to repeat the burnings too frequently. By this I do not mean that all accidents after cauterization have resulted from carelessness or inexperience, for I well know that bad results after any operation, from various causes, may possibly happen to any one, even though the utmost caution is observed.

Looking over the records of my private patients, I find that in hypertrophic rhinitis, intumescent rhinitis, and simple chronic rhinitis, cauterizations have been done about one and one-fifth times on the average in each patient. I find 1450 patients with hypertrophic rhinitis who have been cauterized 1950 times; 450 patients with rhinitis intumescens, cauterized 900 times; and 700 patients with simple chronic rhinitis, cauterized 150 times; making 2600 patients cauterized 3000 times. These figures are not strictly accurate, but are as near as can be computed without actually counting the cauterizations done in each and every case.

Excluding the cases of simple chronic rhinitis (which have not been frequently cauterized), I find 1900 cases suffering from hypertrophic or intumescent rhinitis, that have been cauterized 2850 times, making an average of about one and one-third for each patient. An examination of these records, which have been carefully kept, reveals no serious accident in any case. With comparative frequency, probably in about twenty per cent. of the cases, especially when the cauterization is done in cold weather, patients suffer considerable inconvenience for four or five days afterward from the reaction, and in a limited number of cases, perhaps five per cent., they feel for ten or twelve days afterward as though they had taken an intense cold in the head. In warm weather these very uncomfortable symptoms are not often experienced.

Frequently I have observed patients in whom a linear cauterization across the whole length of the inferior turbinated body would cause excessive swelling, obstruction of the naris, headache, and considerable fever which might last four or five days. In most, if not all of these cases, if cauterization of half this extent were made, the uncomfortable symptoms would not follow.

The inconvenience which patients suffer after cauterization, as a rule, depends largely upon the extent of the burn, the frequency of its repetition, and the care exercised to avoid taking cold.

I have frequently observed slight adhesions following cauterization, especially where it has been done opposite a large spur from the septum, and where the patient has not been able to call upon me within the next four or five days after the operation. In none of these, however, has there been any difficulty in cutting the adhesion, or very great trouble in restoring the patulence of the naris.

In one case only do I find serious hemorrhage to have followed cauterization, and when the patient returned to my office this was checked without great difficulty. In a case of superficial cauterization for hyperæsthetic rhinitis, not included in this series of cases, serious hemorrhage followed; but I did not see the patient for several weeks after the operation, and think it could have been easily checked if he had been under my care. In no other cases do I find that excessive bleeding occurred.

It is not improbable that in this number of cases there are those who have had slight inflammation of the Eustachian tube extending toward the middle ear, but I am sure that in none of them has there occurred inflammation of any importance, and I am unable at present to find records even of slight inflammation of these parts after cauterization.

The cases of inflammation of the Eustachian tube or middle ear that have been reported as having followed cauterization of the nares, I believe have in most instances resulted either from carrying the electrode so far back that the Eustachian orifice has been burned, from making an extensive wound and thus causing undue inflammatory reaction, or from neglecting antiseptic precautions, though such a result might follow from exposure or from peculiar predisposition of the mucous membrane to take on inflammatory action.

Inflammation of the tonsils is said sometimes to follow within a few days after cauterization of the nares, possibly having some connection with the operation, but I have seen no cases of the kind in which any evidence of cause and effect could be obtained.

Erysipelatous inflammation has been the worst sequel of this treatment that I have ever observed among my own

patients, but it has occurred in only four persons out of 2600. In two of these it seemed to have been the direct result of the cauterization, and in both of them it followed cauterization in the naris whenever it was done. In the other two the dermatitis came on at irregular intervals after the cauterization, and seemed to have been the result either of cold, or excessive inflammation resulting from some peculiar idiosyncrasy of the patient, either to the burn or to the remedies which were used subsequently.

In two of the four erysipelatous cases that I have seen, inflammation did not come on until from eight to ten days after the operation, and in one of these it recurred about a month after the cauterization, apparently in consequence of an oily spray which had been used in the nares. This appeared to me to be a case in which there was an idiosyncrasy either against the oil (liquid albolene), or the thymol or oleum carophylli which it contained in solution. In the other of these two cases, two cauterizations were done, one of which was followed by erysipelatous inflammation in about ten days, which appeared to me to be the result of an oily spray, similar to that used in the previous case. In this patient redness of the upper lip and cheek continued for a number of days, and was found to increase when the oily spray was used, and to diminish when the cleansing of the nares was accomplished by a spray of saturated solution of boric acid. I have seen several persons in whom the use of a spray containing only two or three grains of menthol to the ounce would cause inflammation of the nostril and upper lip within three or four days. Dr. A. H. Gilmore reports to me a case in which acute dermatitis always followed the use of a one-grain solution of menthol and carbolic acid each in an ounce of liquid albolene within twenty-four hours.

In the two remaining cases the trouble followed closely upon cauterization, the patient seeming to suffer from a peculiar idiosyncrasy in which inflammation of the skin covering the upper lip, the side of the nose, and the cheek would follow speedily after any cauterization within the nasal cavity. In one of these, a healthy young man, thirty-one years of age, suffering from rhinitis intumescens, who was cauterized four times, the erysipelatous inflammation succeeded the cauterization promptly within from twelve to forty-eight hours in every instance, but it was not very severe and only lasted from three to six days.

In the other of these cases cauterization was performed three times, and each time was speedily succeeded by erysipelatous inflammation. Once this came on the same night, the other times within a few days. These attacks gave the patient considerable inconvenience, but caused no danger.

In two instances I succeeded in reducing the inflammation speedily by the local application to the skin of pure guaiacol, recently recommended by L. Bard (Lyons Medical, lxxiv., 1893), in facial erysipelas.

I have heard of so many cases in which serious, or at least very disagreeable symptoms have followed cauterization of the nasal cavities, that I am led to believe that the comparative infrequence with which such accidents have happened in my practice is largely due to the care exercised at the time of cauterization, to the antiseptic precautions by which it is followed, and to the rule (from which I seldom vary) that a second cauterization should not be made within from ten to fourteen days after the first. This allows time for the healing process to become well advanced and for all inflammatory action to subside before a new inflammation is set up. In a few cases, where for special reasons I have

allowed myself to be over-persuaded by the patient, and have made the succeeding operation in the opposite nostril within from five to eight days, I have nearly always found that the patient afterward suffered great inconvenience from the obstruction, headache and fever. In such cases both sides are likely to become occluded as in severe colds in the head.

My usual course in the treatment of hypertrophic and intumescent rhinitis is as follows:

Having determined that the patient is frequently annoyed, especially at night, by stopping up of one or both nasal cavities, which interferes with nasal respiration and causes a collection of more or less mucus in the naso-pharynx, I recommend cauterization upon one side. Whatever subsequent cauterizations are needed should be made at intervals of not less than two weeks if upon the opposite side, or at longer intervals if upon the same side. Immediately after cauterization, the nasal cavity is sprayed with a solution of five minims of the oil of cloves to the ounce of liquid albolene, and this is followed by the insufflation of two or three grains of iodol. The nostril is then packed lightly with cotton, which the patient is directed to wear whenever he is out of doors for the succeeding four or five days in winter, or for two or three days in summer, changing it as he may desire. The patient in most cases is also given a powder, one or two grains of which he is directed to use in the naris three or four times in twenty-four hours, providing the passage closes up by swelling—or not at all if this does not occur. This powder contains bicarbonate and biborate of soda, each one and one-half per cent., light carbonate of magnesia 3 per cent., and cocaine hydrochlorate four per cent., in sugar of milk sufficient to make ℥i; this gives in all not more than from one-twentieth to one-twelfth of a grain of cocaine daily.

This is applied by means of a glass tube about four inches in length, with a caliber of about one-eighth of an inch, to which is attached a rubber tube, through which the patient blows the powder into his nose. The glass tube is disconnected from the rubber, its round end moved about in the powder until it is filled up about one-fourth of an inch; the same end is then reintroduced into the rubber tube, and the flattened end of the glass tube introduced into the nostril. The patient then places the other end of the rubber tube between his lips and gives a quick strong puff, which forces the powder far into the naris, some of it usually going through to the naso-pharynx. The patient is also given a solution of one-third of a grain of thymol with three or four minims of the oil of cloves to the ounce of liquid albolene, which he is to use in the nose thoroughly as a spray three times daily.

In many cases the cauterization is followed by immediate relief of the obstructed feeling in the nose, but in the majority the cavity is nearly closed much of the time for three or four days subsequently. The patient is directed when practicable to return to me in four or five days, in order that I may be sure no adhesions are taking place. At this time the powder just mentioned is reduced by the addition of twenty-five per cent. of iodol, and the patient is directed to use it for the next ten days, once a day only, if the naris does not stop up, or twice if it does. The spray is continued. Patients are never allowed to use any powder containing cocaine for more than three or four weeks continuously, and then only in small quantity, and they are not given prescriptions for it, which might be refilled and thus engender the cocaine habit.

I believe that the best results are obtained by making a linear cauterization the whole length of the inferior tur-

binated body, usually at the juncture of its middle with its upper or lower third. Commonly two cauterizations, occasionally three, and rarely more, are needed upon each side. In persons in whom the inflammatory reaction is severe after cauterization, a linear cauterization of only half this length should be recommended. Those who cannot tolerate the full cauterization constitute about five per cent. of all those needing the operation.

Before cauterizing, the parts are thoroughly anæsthetized with a four per cent. solution of cocaine, applied by means of a small pledget of cotton wrapped upon a flat applicator; this pledget is moistened in the solution and carried quickly to the back of the nasal cavity. In bringing it forward it is rubbed over all the surface to be anæsthetized, the application requiring about thirty seconds. At intervals of about a minute these applications are repeated, and usually two or three are sufficient to produce complete anæsthesia. A knife-like electrode, having at its end a No. 21 platinum-wire blade about three-fourths of an inch in length, is then introduced to the back part of the nasal cavity and turned against the tissue to be cauterized. The current is then turned on and the electrode is drawn slowly forward to the anterior end of the turbinated body, burning through the soft tissues so as to just graze the bone in two or three places. Sometimes when the tissues are thick, the electrode has to be moved slightly back and forth two or three times before the bone is felt. It is my desire in all these cases to touch the bone lightly in the posterior, middle, and anterior parts, in order that the soft tissues may be firmly bound down when cicatrization takes place. More extensive cauterization than this at one time is seldom justifiable, because it causes such intense inflammation. I am not at all in favor of the frequent cauterizations, daily or every three or four days,

which some physicians practice in treating hypertrophic rhinitis; neither can I see any necessity for causing the patient to return to the office every day or two during the treatment. When patients come to see me from a distance of two to four hours ride, I usually make one cauterization and then direct them to follow out the after treatment carefully at home, and return for cauterization upon the other side, any time that suits their convenience after three weeks; but I prefer, when it is practicable, to see the patient once at the end of four or five days after the cauterization, in order that I may be sure that all is going well. In a very few cases, either because of unusual pain or excessive inflammation and swelling, I find it desirable to see the patient within two or three days after the operation.

From a study of these private cases I conclude:

1. It is important that antiseptic applications be regularly employed after cauterization of the nasal mucous membrane; and that the nostril be closed by cotton for several days whenever the patient is out of doors, to prevent taking cold.

2. As a rule, at least two weeks should intervene between operations upon opposite sides, and three or four weeks between those on the same side.

3. No serious results are at all likely to follow cauterizations made in this way.

4. Practically all cases of hypertrophic or intumescent rhinitis may be cured by this treatment, though occasionally portions of the turbinated bones must be removed.